## STATEMENT OF CONSIDERATIONS

REQUEST BY SOLAR TURBINES INCORPORATED FOR AN ADVANCE WAIVER OF DOMESTIC AND FOREIGN PATENT RIGHTS UNDER DOE COOPERATIVE AGREEMENT NO. DE-FG02-00CH11062; W(A)-01-007; CH-1060

As set out in attached waiver petition and in subsequent discussions with Solar Turbines Incorporated (Solar), Solar has requested an advance waiver of domestic and foreign patent rights for all subject inventions made under the above identified cooperative agreement by its employees and its subcontractors' employees, regardless of tier, except inventions made by subcontractors eligible to retain title to inventions pursuant to P.L. 96-517, as amended, or National Laboratories.

The objective of the cooperative agreement is to develop new alloys for use in high temperature turbomachinery, and specifically, in the Primary Surface Recuperator (PSR) in Solar's Mercury 50 gas turbine. As brought out in paragraph 2 of Solar's petition, the new material will be used in high temperature applications which currently require the use of relatively expensive Inconel alloy at less than one third of the cost. The project includes alloy development, application to recuperator designs, and testing in actual gas turbine systems. The recuperator performance and cost improvements that the new alloy is expected to offer should significantly enhance the commercial viability of Solar's Mercury 50 gas turbine. Additionally, Solar expects to use the alloy in the PSR's it sells to other turbine manufactures as well as promoting the general commercial availability of the alloy.

The work under this agreement is anticipated to take place over a period of about 3 ½ years at a total cost of \$6,552,655. Solar is obligated to cost share \$1,996,796, or about thirty percent(30%) of the total cost of the project. In view of the cost sharing and other equities between Solar and its subcontractors, it is anticipated that the parties will develop an appropriate allocation of patent rights among the participants to facilitate the expeditious development of the technology forming the subject matter of this agreement. Accordingly, DOE will waive title to all subject inventions made by Solar's employees and its subcontractors' employees, regardless of tier, except inventions made by the subcontractors eligible to retain title pursuant to P.L. 96-517, as amended, or National Laboratories, to Solar or its subcontractors, as mutually agreed by the parties. Except as otherwise approved by DOE Patent Counsel, a party's acceptance of a subcontract under this agreement, at any tier, shall constitute that party's notice to DOE that it accepts the terms and conditions of this advance waiver.

Referring to paragraph 5 of the waiver petition, Solar has participated in a number of recent DOE materials and turbine development programs. For example, the Mercury 50 turbine incorporating the PSR which Solar expects to improve under this agreement was developed in connection with the Department's Advanced Turbines Systems Program (ATS Program, DOE Contract No. DE-FC21-95MC31173). Similarly, under the Department's Ceramic Stationary Gas Turbine Program (CSGT Program, DOE Contract No. DE-AC02-92CE40960), Solar made significant developments in advanced ceramic materials and design technologies.

Solar is well known for its technical expertise and industrial experience in low emissions combustion technology, advanced industrial gas turbine design, testing and operation, and use of advanced materials. As indicated in paragraph 6 of the petition, Solar believes that it is the world's leading manufacturer of mid-range (1-20 MW) industrial gas turbines and turbomachinery products for mechanical drive, generation and cogeneration applications. Solar's products are sold worldwide in a variety of markets including the oil and gas industry, industrial cogeneration, independent power producers and related applications for schools, hospitals and the like. This coupled with Solar's cost sharing, clearly indicates the likelihood that Solar will continue the development and commercialization of the results of this agreement.

This advance waiver of the Government's rights in inventions is subject to the usual advance patent waiver and background data licensing provisions and the Government license, march-in rights, and preference for U.S. industry provisions set out in 35 U.S.C. 202-204. The advance patent waiver also includes the attached U.S. Competitiveness clause (paragraph t) which requires products embodying any waived invention or produced through the use of any waived invention be manufactured substantially in the United States unless the participant can show to the satisfaction of DOE that it is not commercially feasible to do so. The Contractor further agrees to make the above condition binding on any assignee or licensee or any entity otherwise acquiring rights to any waived invention, including subsequent assignees or licensees. Should the Contractor or other such entity receiving rights in any waived invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by DOE

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition. If anything, the technology forming the subject matter of this agreement can be expected to provide a new entrant in an already crowded market.

Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in the commercialization of the results of the subcontract in a fashion which will make the technology available to the public in the shortest practicable time. Therefore, upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 10 CFR Part 784, all of which have been considered, it is recommended that the requested waiver be granted.

Thomas G. Anderson Assistant Chief Counsel Office of Intellectual Property Law

Date:

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Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patents rights of the scope described above, and therefore the waiver is granted. This waiver will not apply to any modification or extension of the subcontract, where through such modification or extension, the purpose, scope or cost of the subcontract has been substantially altered.

CONCURRENCE:	APPROVAL:
	v
William P. Parks, Jr., Director	Paul A. Gottlieb
Office of Power Technologies	Assistant General Counsel for Technology
-	Transfer and Intellectual Property, GC-62
EE-16	
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Date: // 23/9/	Date: / /6-01

(t) <u>U. S. COMPETITIVENESS</u> The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.

## WAIVER ACTION - ABSTRACT

W(C)-01-007 (CH-1060)

**REQUESTOR** 

**CONTRACT SCOPE OF WORK** 

**RATIONALE FOR DECISION** 

**DISPOSITION** 

Solar Turbines Incorporated High Temperature Alloy

Development for

Turbomachinery

30%

**Cost Sharing**